



Agenda Item 4A: Initiatives for the development and sustainability of air transport in the Region (Declaration to promote Connectivity through the Development and Sustainability of Air Transport in the Pan American Region – Vision 2020-2035 and goals of the A41)

PROMOTION OF PROJECTS FOR THE DEVELOPMENT OF SUSTAINABLE AVIATION FUELS

(Presented by Argentina)

SUMMARY

This paper presents the most important milestones that Argentina and ICAO have achieved in the development of sustainable aviation fuels (SAFs). It also describes the challenges that the South American Region will have to overcome in order to develop these fuels locally.

The Meeting is invited to:

- a) take note of the information provided herein; and
- b) formalise a permanent forum of a technical-political nature in which to discuss and exchange experiences and define joint lines of work in order to facilitate the development of SAFs in South America.

References:

1. Annex 16 — *Environmental Protection*, Volume IV — *Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)*, Chapter 2.
2. Assembly Resolution A39-3, *Consolidated statement of continuing ICAO policies and practices related to environmental protection – Global Market-based Measure (MBM) scheme*.
3. Assembly Resolution A40-18, *Consolidated statement of continuing ICAO policies and practices related to environmental protection – Climate change*.
4. Assembly Resolution A40-19, *Consolidated statement of continuing ICAO policies and practices related to environmental protection – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)*.
5. Declaration of the Second ICAO Conference on Aviation and Alternative Fuels (CAAF/2).
6. Guide on Sustainable Aviation Fuels, Version 2 (2018).
7. Resolution A41-22: “Consolidated statement of continuing ICAO policies and practices related to environmental protection — Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).
8. Report on the feasibility of a long-term aspirational goal (LTAG) for international civil aviation CO₂ emission reductions.

ICAO strategic objectives:

This working paper relates to Strategic Objective E
- – *Environmental Protection*

1. Introduction

1.1 The Chicago Convention (1944) stipulates in its preamble that international air transport services must be established on the basis of equal opportunities.

1.2 In 2016, the ICAO Assembly approved Resolution A39-3 in which it decided to implement a global market-based measure (MBM) scheme, which comprises the Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) as part of a set of measures that also include aircraft technology improvements, operational improvements and sustainable aviation fuels (SAFs) to meet ICAO's global aspirational goals.

1.3 In December 2021, Argentina submitted to ICAO an updated action plan, in which various measures aimed at reducing CO₂ emissions were proposed, including the development of sustainable aviation fuels.

1.4 In March 2022, the ICAO Committee on Aviation Environmental Protection (CAEP) drafted and published the *Report on the feasibility of a long-term aspirational goal (LTAG) for international civil aviation CO₂ emission reductions*, which analysed three future scenarios.

1.5 Said report noted that sustainable fuels for direct replacement would have the greatest impact on residual CO₂ emissions, driving global reductions until 2050. It also stated that hydrogen was not expected to make a significant contribution (only 1.9% of total energy in 2050).

1.6 The document also highlighted that in scenario 1, SAFs would account for 20% of the total CO₂ emission reduction. In scenario 2, the reduction would reach 41%, and in scenario 3, 55%.

1.7 The report identifies three types of SAFs, depending on the raw material used. Thus, mention is made of those derived from biomass (including solid and liquid waste), those derived from gaseous waste (e.g. from ethanol or cement production), and those produced from atmospheric CO₂ (through capture processes).

1.8 Another aspect to highlight is the overall costs calculated for the production of SAFs from biomass, which in scenario 1 would be USD 480 billion (for manufacturers and distributors) and USD 300 billion (for airlines). In the case of scenario 2, they would be USD 1.2 billion for both actors, respectively. Finally, for scenario 3, the costs would be USD 950 billion (manufacturers and distributors) and USD 1.6 billion (airlines).

1.9 In June 2022, ICAO launched the ICAO Assistance, Capacity Building and Training Programme on Sustainable Aviation Fuels (ACT-SAF), in line with the ICAO principle of No Country Left Behind and ICAO's 2050 Vision for SAFs. So far, more than 65 countries, including 6 SAM States, have joined the programme, showing commitment to its development.

1.10 Several working papers were presented at the ICAO 41st Assembly in 2022 highlighting the importance of creating incentives for the development of SAFs, particularly in terms of technical capabilities and project funding for developing countries.

1.11 In November 2023, the Third ICAO Conference on Aviation and Alternative Fuels (CAAF/3) will be held, a forum to present the progress made in the production of SAFs and to discuss different aspects related to their future development.

1.12 South America is one of the Regions with the highest production of biofuels in the world. This means that the Region could, in the medium and long term, play a central role in the production of SAFs. Furthermore, the installed capacity and the fact that it has highly trained professionals also make it possible to envisage the execution of SAF projects based on other raw materials, such as urban solid waste.

1.13 The main barrier for SAF development in the Region is access to funds for financing projects of a certain scale.

2. Discussion

2.1 There are currently several initiatives and projects for the production of SAFs in South America, including a project by the Brazilian company BSBIOS, in Paraguay. However, more projects are needed in the Region to enable local aircraft operators to access the supply of SAFs effectively and at reasonable costs.

2.2 Despite all of the aforementioned potential, there are no forums or platforms for a periodic exchange among the States of the Region, which reduces the possibility of accessing resources and technology from countries outside South America, as well as exploring the possibility of achieving local developments. Therefore, working together at regional level would strengthen the position of SAM States within the framework of ICAO negotiations, as well as generate synergies among the different local actors involved in the development of SAFs.

3. Action suggested

3.1 The Meeting is invited to:

- a) take note of the information presented herein; and
- b) formalise a permanent forum of a technical-political nature in which to discuss and exchange experiences and define joint lines of work in order to facilitate the development of SAFs in South America.

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